

WHAT IS CLAIMED IS:

1. A high-speed roaming method of a wireless LAN comprising a network, a plurality of access points provided in the network, and a mobile terminal that is radio-connected to one of said
5 plurality of access points via a communication system using a frequency hopping, wherein

each of said access points

registers previously a predetermined number of
access points out of respective neighboring access points as
10 neighboring access points,

sends out hopping information of the own access
point thereof periodically to the network at mutually different
timings,

receives the hopping information of the neighboring
15 access points out of respective access points to construct the
own access points thereof as a database, and

synchronize all access points in a same subnet of
the network and sends out radio beacons synchronously from said
access points; and

20 said mobile terminal

monitors said radio beacons of a connected access
point and downloads hopping information of the neighboring
access points from said connected access point,

monitors radio beacons of said neighboring access
25 points based on the hopping information,

construct the monitored hopping information as a database to always compare radio environments, and

select and connect the access point having a best radio situation by referring the database of said neighboring
5 access points when a quality of the radio beacon of said connected access point is reduced lower than a predetermined value.

2. The high-speed roaming method of a wireless LAN according to claim 1, wherein

10 each of said access points sets previously one access point of respective access points connected to the same subnet as a master access point, and sets the access points other than said master access point as slave access points,

15 said master access point sends out a master beacon containing time information to the network at a predetermined time interval, and

said slave access points are operated in synchronism with said master access point by receiving said master beacon and comparing time information contained in said master beacon with
20 the own time information thereof to correct.

3. The high-speed roaming method of a wireless LAN according to claim 2, wherein

when an operation of said master access point is stopped
25 because of a predetermined reason, another access point

connected to the same subnet backups said master access point
in place of said master access point.

4. The high-speed roaming method of a wireless LAN according
to any one of claims 1 to 3, wherein

when said mobile terminal is connected to said access
point having a best radio situation, such mobile terminal is
connected subsequently to said access point having a second
best radio situation.

5. The high-speed roaming method of a wireless LAN according
to any one of claims 1 to 4, wherein

when said mobile terminal is not connected to all
neighboring access points, such mobile terminal is connected
to said access point having a good communication situation by
scanning all frequency channels.

6. The high-speed roaming method of a wireless LAN according
to any one of claims 1 to 5, wherein

said mobile terminal is connected to said access point
having a best communication situation, by scanning all
connectable access points out of said access points provided
in the network at a rising time.